AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A method comprising:

preparing capability information of each of a plurality of devices with regard to signal formats;

designating a device that ultimately receives a signal;

collecting the capability information of every one of the plurality of devices;

producing a plurality of possible transmission paths between the receiving device and other devices, based on the capability information collected;

identifying a device that transmits a signal and a format of the transmitted signal;

selecting one of the plurality of possible transmission paths that matches the transmitting device and the transmitted signal format for a transmission path,

issuing commands to the plurality of devices involved in the selected transmission path upon a change of the transmitted signal format; and

controlling input/output of the plurality of devices according to the issued commands to establish the transmission path for issuing commands to the plurality of devices involved in the possible selected transmission paths upon a change in signal format and selecting one of an output of a decoder and an analog terminal.

Claim 2 (Original): The method of claim 1, wherein the capability information comprises receiving, transmitting and converting information.

Claim 3 (Original): The method of claim 1, wherein
the possible transmission paths are specified in terms of the order of devices involved in the transmission paths and a signal format between the devices involved.

Claim 4 (Original): The method of claim 2, wherein the producing step comprises:

seeking other devices capable of transmitting a signal in the same formats as the receiving device is capable of receiving.

Claim 5 (Original): The method of claim 4, wherein
the producing step comprises

seeking other devices that are capable of converting a signal into the formats that the receiving device is capable of receiving;

ordering the converting devices before the receiving device;

seeking other devices that are capable of transmitting a signal in the format that the converting devices are capable of converting from; and

ordering the transmitting devices before the converting devices.

Claim 6 (Original): The method of claim 5, wherein

the capability information for each of the plurality of devices is originally possessed in each of the plurality of devices.

Claim 7 (Original): The method of claim 6, wherein

the plurality of devices communicate with each other to collect the capability information.

Claim 8 (Original): The method of claim 1, further comprising:

displaying the selected transmission path on a monitor (305).

Claim 9 (Currently Amended): An apparatus comprising:

a means for storing capability information regarding signal formats for each of a plurality of devices;

an analog input terminal (302);

a memory (306) for storing capability information of other devices coupled to a digital interface (308);

a digital input/output terminal (300) coupled to the memory;

a decoder (303) coupled to the digital interface (308); and

a controller (307) which refers to contents in the information storage means and the memory to produce possible transmission paths based on the capability information stored in the information storage means and the memory (306), wherein the controller (307) comprises a command generator for issuing commands to devices involved in the possible selected transmission paths upon a change in signal format and a selector for selecting one of an output of the decoder (303) and the analog terminal (302).

Claim 10 (Original): The apparatus of claim 9, wherein the capability information comprises receiving, transmitting and converting information.

Claim 11 (Canceled)

Claim 12 (Currently Amended): The apparatus of claim ~~11~~9, wherein the selector is coupled to a switch (304), wherein the switch is removably coupled to one of an output of the decoder (303) and the analog terminal (302).

Claim 13 (Original): The apparatus of claim 12, wherein
the controller (307) selects one of the possible transmission paths according to a transmitting device and a transmitted signal format.

Claim 14 (Original): The apparatus of claim 13, wherein
the switch (304) is automatically controlled by the selector.

Claim 15 (Original): The apparatus of claim 9, wherein
the information storage means is a configuration ROM.

Claim 16 (Original): The apparatus of claim 15, wherein
the memory (306) is a random access memory; and
the capability information of other devices is collected through the digital input/output terminal (300) and stored in the random access memory.

Claim 17 (Original): The apparatus of claim 9, wherein
the controller (307) operates according to a series of instructions.

Claim 18 (Original): The apparatus of claim 9, further comprising:
a monitor (305) for displaying the selected transmission path.

Claim 19 (Currently Amended): A method comprising:
preparing capability information of each of a plurality of devices with regard to signal formats;
designating a device that ultimately receives a signal;
collecting the capability information of every one of the plurality of devices;

producing a plurality of possible transmission paths between the receiving device and other devices, based on the capability information collected;

identifying a device that transmits a signal and a format of the transmitted signal;

selecting one of the plurality of possible transmission paths that matches the transmitting device and the transmitted signal format for a transmission path,

issuing commands to the plurality of devices involved in the selected transmission path upon a change in signal format;

controlling input/output of the plurality of devices according to the issued commands to automatically establish the transmission path, and by issuing commands to the plurality of devices involved in the possible selected transmission paths upon a change in signal format and selecting one of an output of a decoder and an analog terminal; and

displaying the selected transmission path on a monitor (305).

Claim 20 (Original): The method of claim 19, wherein the capability information comprises receiving, transmitting and converting information.

Claim 21 (Original): The method of claim 19, wherein
the possible transmission paths are specified in terms of the order of devices involved in the transmission paths and a signal format between the devices involved.

Claim 22 (Original): The method of claim 21, wherein the producing step comprises:

seeking other devices capable of transmitting a signal in the same formats as the receiving device is capable of receiving.

Claim 23 (Original): The method of claim 21, wherein

the producing step comprises

seeking other devices that are capable of converting a signal into the formats that the receiving device is capable of receiving;

ordering the converting devices before the receiving device;

seeking other devices that are capable of transmitting a signal in the format that the converting devices are capable of converting from; and
ordering the transmitting devices before the converting devices.

Claim 24 (Original): The method of claim 19, wherein

the capability information for each of the plurality of devices is originally possessed in each of the plurality of devices.

Claim 25 (Original): The method of claim 19, wherein

the plurality of devices communicate with each other to collect the capability information.

Claim 26 (Currently Amended): An apparatus comprising:

a means for storing capability information regarding signal formats for each of a plurality of devices;

an analog input terminal (302);

a memory (306) for storing capability information of other devices coupled to a digital interface (308);

a digital input/output terminal (300) coupled to the memory (306);

a decoder (303) coupled to the digital interface (308);

a monitor (305) coupled to one of an output of the decoder (303) and the analog input terminal (302); and

a controller (307) which refers to contents in the information storage means and the memory (306) to produce possible transmission paths based on the capability information stored in the information storage means and the memory, wherein the controller (307) comprises a command generator for issuing commands upon change in signal format to devices involved in the possible selected transmission paths to automatically control connections of devices and a selector for selecting one of an output of the decoder (303) and the analog terminal (302), wherein the selector is coupled to a switch (304), wherein the switch is removably coupled to one of an output of the decoder (303) and the analog terminal (302).

Claim 27 (Original): The apparatus of claim 26, wherein the capability information comprises receiving, transmitting and converting information.

Claim 28 (Canceled)

Claim 29 (Currently Amended): The apparatus of claim ~~28~~26, wherein

the controller (307) automatically selects one of the possible transmission paths according to a transmitting device and a transmitted signal format.

Claim 30 (Original): The apparatus of claim 29, wherein the switch (304) is automatically controlled by the selector.

Claim 31 (Original): The apparatus of claim 26, wherein
the information storage means is a configuration ROM. 32.

Claim 32 (Original): The apparatus of claim 26, wherein
the memory (306) is a random access memory; and
the capability information of other devices is collected through the digital input/output terminal (300) and stored in the random access memory.